#09

SEQUENCE LISTING

<110> Coleman, John R.

<120> Nucleic Acid Molecules and Polypeptides for Catabolism of Abscisic Acid

<130> 3310 0003

<140> US 10/022,025

<141> 2001-12-13

<150> US 60/254,819

<151> 2000-12-13

<160> 8

<170> PatentIn version 3.0

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<211> 2009

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<213> Arabidopsis thaliana

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<222> (1)..(2009)

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Cys Ser Val Leu Ser Gln Thr Asn Leu Ala Phe Ser Leu Leu Ala Val
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aca atc atc tgg ctc gcc ata tct ctc ttc tta tgg acc tat ccc ggt      144
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        35                  40                  45

gga cct gct tgg ggg aaa tac ctc ttc ggc cgg tta ata tcc ggt tca      192
Gly Pro Ala Trp Gly Lys Tyr Leu Phe Gly Arg Leu Ile Ser Gly Ser
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tac aaa acc gga aac gtt att ccc ggt cca aaa ggc ttc cct ttg gtt      240
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65                  70                  75                  80

gga agc atg tca ctc atg tca agc act cta gct cac cga cga atc gct      288
Gly Ser Met Ser Leu Met Ser Ser Thr Leu Ala His Arg Arg Ile Ala
                85                  90                  95

gat gca gct gag aaa ttc gga gcc aag agg ctc atg gct ttc agc tta      336
Asp Ala Ala Glu Lys Phe Gly Ala Lys Arg Leu Met Ala Phe Ser Leu
            100                 105                 110

gga gag act cgc gtg atc gtc acg tgc aat ccc gac gta gcg aaa gag      384
Gly Glu Thr Arg Val Ile Val Thr Cys Asn Pro Asp Val Ala Lys Glu
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att ctg aat agc ccg gtt ttt gct gat cga ccg gtt aaa gaa tcg gct      432
Ile Leu Asn Ser Pro Val Phe Ala Asp Arg Pro Val Lys Glu Ser Ala
    130                 135                 140

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Tyr Ser Leu Met Phe Asn Arg Ala Ile Gly Phe Ala Pro His Gly Val
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tac tgg cga acg ctt cgc cgt atc gct tcg aac cat ctc ttt agt aca      528
Tyr Trp Arg Thr Leu Arg Arg Ile Ala Ser Asn His Leu Phe Ser Thr
                165                 170                 175

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cgt gag ttg ctt aaa acg gcg tcg ctt aac aac atg atg tgc tct gta      672
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225                 230                 235                 240

atg gtc gaa gaa ggt tat gat ttg ctc gga acg ttg aat tgg act gat      768
Met Val Glu Glu Gly Tyr Asp Leu Leu Gly Thr Leu Asn Trp Thr Asp
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cac ctt cct tgg cta tcg gag ttt gat cct caa aga ctc cgg tct aga      816
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tgt tcc aca ctc gta cca aag gta aac cgg ttt gta tcc cgg att ata      864
Cys Ser Thr Leu Val Pro Lys Val Asn Arg Phe Val Ser Arg Ile Ile
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tcc gaa cac cgt aat caa acc ggt gat ttg cct cgt gat ttc gtc gac      912
Ser Glu His Arg Asn Gln Thr Gly Asp Leu Pro Arg Asp Phe Val Asp
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gtt ttg ctc tcc ctc cat ggt tca gat aaa tta tcc gac ccg gac ata      960
Val Leu Leu Ser Leu His Gly Ser Asp Lys Leu Ser Asp Pro Asp Ile
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atc gcc gtt ctt tgg gag atg ata ttc aga gga aca gac aca gtt gcg     1008
Ile Ala Val Leu Trp Glu Met Ile Phe Arg Gly Thr Asp Thr Val Ala
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gtc tta atc gag tgg atc ctc gct agg atg gtc ctt cat cca gat atg     1056
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caa tca acg gta caa aac gag ctg gat caa gta gtc ggg aaa tca aga     1104
Gln Ser Thr Val Gln Asn Glu Leu Asp Gln Val Val Gly Lys Ser Arg
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gcc cta gat gaa tct gac ttg gct tca ctt cca tat cta acg gct gtg     1152
Ala Leu Asp Glu Ser Asp Leu Ala Ser Leu Pro Tyr Leu Thr Ala Val
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Val Lys Glu Val Leu Arg Leu His Pro Pro Gly Pro Leu Leu Ser Trp
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gcc cgt ttg gcc ata aca gac acg atc gtt gat ggt cgt ctt gtt ccg     1248
Ala Arg Leu Ala Ile Thr Asp Thr Ile Val Asp Gly Arg Leu Val Pro
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gca ggg acc aca gca atg gtg aac atg tgg gcc gta tcg cat gat cca     1296
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gca cct ttc ggg tcg ggt cgt cgg att tgc ccc ggg aag aat ctt ggt     1440
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ttt act acc gtt atg ttt tgg acg gcg atg atg tta cat gag ttt gaa     1488
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Thr Ile Ile Trp Leu Ala Ile Ser Leu Phe Leu Trp Thr Tyr Pro Gly
        35                  40                  45

Gly Pro Ala Trp Gly Lys Tyr Leu Phe Gly Arg Leu Ile Ser Gly Ser
    50                  55                  60

Tyr Lys Thr Gly Asn Val Ile Pro Gly Pro Lys Gly Phe Pro Leu Val
65                  70                  75                  80

Gly Ser Met Ser Leu Met Ser Ser Thr Leu Ala His Arg Arg Ile Ala
                85                  90                  95
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Asp Ala Ala Glu Lys Phe Gly Ala Lys Arg Leu Met Ala Phe Ser Leu
          100                 105                 110

Gly Glu Thr Arg Val Ile Val Thr Cys Asn Pro Asp Val Ala Lys Glu
      115                 120                 125

Ile Leu Asn Ser Pro Val Phe Ala Asp Arg Pro Val Lys Glu Ser Ala
  130                 135                 140

Tyr Ser Leu Met Phe Asn Arg Ala Ile Gly Phe Ala Pro His Gly Val
145                 150                 155                 160

Tyr Trp Arg Thr Leu Arg Arg Ile Ala Ser Asn His Leu Phe Ser Thr
                165                 170                 175

Lys Gln Ile Arg Arg Ala Glu Thr Gln Arg Arg Val Ile Ser Ser Gln
          180                 185                 190

Met Val Glu Phe Leu Glu Lys Gln Ser Ser Asn Glu Pro Cys Phe Val
      195                 200                 205

Arg Glu Leu Leu Lys Thr Ala Ser Leu Asn Asn Met Met Cys Ser Val
  210                 215                 220

Phe Gly Gln Glu Tyr Glu Leu Glu Lys Asn His Val Glu Leu Arg Glu
225                 230                 235                 240

Met Val Glu Glu Gly Tyr Asp Leu Leu Gly Thr Leu Asn Trp Thr Asp
                245                 250                 255

His Leu Pro Trp Leu Ser Glu Phe Asp Pro Gln Arg Leu Arg Ser Arg
          260                 265                 270

Cys Ser Thr Leu Val Pro Lys Val Asn Arg Phe Val Ser Arg Ile Ile
      275                 280                 285

Ser Glu His Arg Asn Gln Thr Gly Asp Leu Pro Arg Asp Phe Val Asp
  290                 295                 300

Val Leu Leu Ser Leu His Gly Ser Asp Lys Leu Ser Asp Pro Asp Ile
305                 310                 315                 320

Ile Ala Val Leu Trp Glu Met Ile Phe Arg Gly Thr Asp Thr Val Ala
                325                 330                 335

Val Leu Ile Glu Trp Ile Leu Ala Arg Met Val Leu His Pro Asp Met
          340                 345                 350
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Gln Ser Thr Val Gln Asn Glu Leu Asp Gln Val Val Gly Lys Ser Arg
        355                 360                 365

Ala Leu Asp Glu Ser Asp Leu Ala Ser Leu Pro Tyr Leu Thr Ala Val
    370                 375                 380

Val Lys Glu Val Leu Arg Leu His Pro Pro Gly Pro Leu Leu Ser Trp
385                 390                 395                 400

Ala Arg Leu Ala Ile Thr Asp Thr Ile Val Asp Gly Arg Leu Val Pro
                405                 410                 415

Ala Gly Thr Thr Ala Met Val Asn Met Trp Ala Val Ser His Asp Pro
            420                 425                 430

His Val Trp Val Asp Pro Leu Glu Phe Lys Pro Glu Arg Phe Val Ala
        435                 440                 445

Lys Glu Gly Glu Val Glu Phe Ser Val Leu Gly Ser Asp Leu Arg Leu
    450                 455                 460

Ala Pro Phe Gly Ser Gly Arg Arg Ile Cys Pro Gly Lys Asn Leu Gly
465                 470                 475                 480

Phe Thr Thr Val Met Phe Trp Thr Ala Met Met Leu His Glu Phe Glu
                485                 490                 495

Trp Gly Pro Ser Asp Gly Asn Gly Val Asp Leu Ser Glu Lys Leu Arg
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Leu Ser Cys Glu Met Ala Asn Pro Leu Pro Ala Lys Leu Arg Arg Arg
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